

CLAIMS

1. A trap for catching woodland, garden, and agricultural insect pests, consisting of a catching part with an outlet opening, and a container for storing caught pests, characterized in that a device (17, 32, 42) for separating the captured pests from water and small debris is placed on a caught pests movement path extending from the outlet opening (143) of the catching part (12, 37, 43) to the container (11, 31, 41).
2. The trap according to claim 1 wherein the device for separating the captured pests from water and small debris is placed between the outlet opening (143) of the catching part (43) and the container (41).
3. The trap according to claim 1 wherein the device for separating the caught pests from water and small debris has a shape of a funnel (135) having a funnel inlet covered up by a mesh (32) and an funnel outlet (36) situated outside of the container (31) for storing the caught pests wherein the funnel inlet is placed below the outlet opening of the catching part (37).
4. The trap according to claim 1 wherein the device for separating the caught pests from water and small debris has a shape of a funnel (76), made out of rolled up edges of an opening located in a bottom or in one of side walls of the container (71) for storing the caught pests, wherein an inlet of the funnel is covered up by a mesh (75), and its outlet is situated outside of the container (71) for storing the captured pests and the inlet of the funnel is placed below the outlet opening of the catching part and wherein the inlet to the funnel overlaps a horizontal projection of the outlet opening (74) of the catching part (77).
5. The trap according to claim 4 wherein the mesh covering the funnel inlet is situated parallelly, or at an angle to the bottom of the container for storing the caught pests.
6. The trap according to claim 1 wherein the device for separating the caught pests from water and small debris is a mesh-made tube insert (54) situated at an angle and connecting the catching part with the container for storing the caught pests.
7. The trap according to claim 1 wherein the device for separating the caught pests from water and small debris is a tube (54) formed from mesh.

8. The trap according to claim 1 wherein the device for separating the caught pests from water and small debris is a sloping partition (94), situated above the container, with drainage openings, an edge of which adjoins an edge of an opening of an additional container attached to a bottom or to a side wall of the container.

9. The trap according to claim 8 wherein the sloping partition contains a mesh-covered opening (92), situated below the outlet opening of the catching part, wherein the outlet opening overlaps the mesh-covered opening.

10. The trap according to claim 1 wherein the device for separating the caught pests from water and small debris has a shape of a funnel covered at the top by a mesh and wherein a lower outlet of the funnel is set in a double elbow with branching tubes having ends set in openings made in side walls of the container, wherein the funnel's inlet opening is situated under the outlet opening of the trap's catching part, and is not smaller than the outlet opening of the catching part.

11. The trap according to claim 1 wherein the device for separating the caught pests from water and small debris is a mesh (92) placed between the side wall and a sloping partition (94), which protrudes outside the container, through an opening made in a side wall of the container (91).

12. The trap according to claim 11 wherein the sloping partition, located under the mesh, and the mesh itself, are situated at an angle to a leveled bottom of the container and wherein a chamber for storing the captured pests, is marked out by the partition and the bottom of the container and at the same time, the mesh is situated under the outlet opening of the trap's catching part, and is not smaller than the said outlet opening of the catching part.

13. The trap according to claim 1 wherein the catching part is connected to the container through a reducer (73) forming a device for directing the captured pests.

14. The trap according to claim 13 wherein the device for separating the captured pests from water and small debris is a mesh placed in openings made in sloping walls of the reducer.

15. The trap according to claim 1 wherein the container for storing the caught pests is partially filled by a solution (40) of water, light and heavy alcohols, detergent, and an attracting agent.

16. The trap according to claim 1 wherein the container for storing the caught pests is partially filled by a solution (40) of water, ethylene glycol (20-100 %), ethanol (10-50 %), antitranspirant (1-5%), and a functional form of a pheromone (3-

20 ‰).

17. The trap according to claim 1 wherein the container for storing the caught pests is made of transparent material and a side wall of the container is provided with a scale allowing to define amount of caught pests without taking them out and counting.

18. The trap according to claim 13 wherein the reducer matches the outlet opening of the catching part to a surface of a filtering mesh placed in the container for storing the captured insects.

19. The trap according to claim 1 wherein the catching part is topped by a roof containing an opening.

20. The trap according to claim 3 wherein the mesh is made from a hydrophobic material.

21. The trap according to claim 1 wherein the catching part (78) has a device (73) directing insects towards the device (75) for separating the captured insects from water and small debris.

22. The trap according to claim 1 wherein the catching part (417) has shape of a container, opened at its top, narrowing towards its bottom and provided with a lower part (407) forming a directing device.

23. The trap according to claim 22 wherein above the catching part (417) a roof (41) is established.

24. The trap according to claim 23 wherein the space between the catching part and the roof creates an entrance area (411) facilitating easier entering the trap.

25. The trap according to claim 22 wherein the catching part and the container for the caught pests is covered with a mesh sack (526), top edges of which are fastened tightly with outer edges of the container.

26. The trap according to claim 1 wherein an outer element (658) of the catching part has a shape of a pyramid having an opening at its top.

27. The trap according to claim 26 wherein below the opening of the pyramid an inner element is placed, which forms a directing device (636), the outlet opening of which is placed above the separating device (634).

28. The trap according to claim 27 wherein round the opening of the pyramid is placed an elastic flange sealing the outer element of the catching part to the inner element of the catching part.

29. The trap according to claim 27 wherein side walls (638) of the pyramid have a shape of a trapezoid and are set at an angle of between 25 to 35 degrees to the ground level.
30. The trap according to claim 29 wherein the side walls of the pyramid are made of a dark material fastened to a rigid frame.
31. The trap according to claim 30 wherein the side walls of the pyramid end with an apron (640), which is partially buried in the ground.
32. The trap according to claim 1 wherein the catching part is a container (753) in a shape of a truncated wedge finished at its bottom with a directing device.
33. The trap according to claim 32 wherein side walls of the container (753) are provided with mini funnels (755), which narrow towards container's inside.
34. The trap according to claim 33 wherein the mini funnels (755) are shaped as truncated cones or gutters.
35. The trap according to claim 33 wherein the mini funnels (755) are connected with U-shaped clamps (756).
36. The rap according to claim 33 wherein outer walls of the container are harmonica-shaped divided into multiple symmetrical wedges connected by elastic links (758).
37. The trap according to claim 1 wherein the catching part (763) is formed from cuboids connected together and situated creating a star-shape.
38. The trap according to claim 1 wherein the catching part (773) is a cuboid having walls with small openings or mini funnels (774) on them and larger entrance openings (777).
39. The trap according to claim 1 wherein the device for separating the caught pests from water and small debris is an additional container (901) with walls made of material penetrable by the water and steam and not penetrable by the light.
40. The trap according to claim 39 wherein the additional container (901) has an opening (906) in its upper part, which leads to a container (903), made of material penetrable by the light, for storing the caught pests.
41. A method for catching woodland, garden, and agricultural insect pests, using a trap consisting of a catching part and a container for storing the captured insects characterized in that the trap with a device separating the captured pests from water and small debris, placed on a path along which the caught pests move, is hung with a bottom of the container for storing the caught insects being in horizontal position.

42. The method for catching insect pests according to claim 41 wherein the device separating the captured insects from water and small debris is placed between the outlet opening of the catching part, and the chamber where they are stored.

43. The method for catching insect pests according to claim 41 wherein the outlet opening of the catching part is directed towards the device for separating the captured insects from water and small debris using a directing device.